Fig.1 Prior Art

• Streamable content (Video, audio, speech) ~101	• Non-streamable content (Still images, graphics, text, synth. audio) ~106 • Presentation description ~110	• Presentation description ~110
Payload formats ~103	HTTP ~107	RTSP ~109
RTP ~102		
UDP ~104	TCP ~108	UDP ~104
IP ~105		

2a

QoE-header = "QoE-Metrics" ";" "Off" / 1#(stream-url ";"

Metrics" ";" Sending-rate [";" Range]) CRLF

stream-url = "url" "=" rtsp_URL

Metrics = "metrics" "=" "{" 1#(1*Text) "}"

Sending-rate = "rate" "=" 1*DIGIT / "End"

Range = as defined in IETF RFC 2327

DIGIT = as defined in IETF RFC 2327

Rtsp_URL = as defined in IETF RFC 2327

Fig2a Prior Art

2b

Feedbackheader = "QoE-Feedback" ":"

1#(stream-url 1 * (parameters) [";" Range] CRLF)

stream-url = "url" "=" rtsp_URL

parameters = ";" Metrics "="

"{" SP / 1#(Value [SP Timetamp]) "}"

Metrics = *TEXT

Value = 1*DIGIT ["." *DIGIT]

Timestamp = 1*DIGIT

Range = as defined in IETF RFC 2327

DIGIT = as defined in IETF RFC 2327

Rtsp_URL = as defined in IETF RFC 2327

SP = as defined in IETF RFC 2327

Fig2b Prior Art

QoE-header = "QoE-Metrics" ";" "Off" / 1#(stream-url ";"
Metrics" ";" Sending-rate [";" Metrics-class] [";" Range]) CRLF
stream-url = "url" "=" rtsp_URL
Metrics = "metrics" "=" "{" 1#(1*Text) "}"
Sending-rate = "rate" "=" 1*DIGIT / "End"
Metrics-class = "class" "=" "0"/"1"/"2"
Range = as defined in IETF RFC 2327
DIGIT = as defined in IETF RFC 2327
Rtsp_URL = as defined in IETF RFC 2327
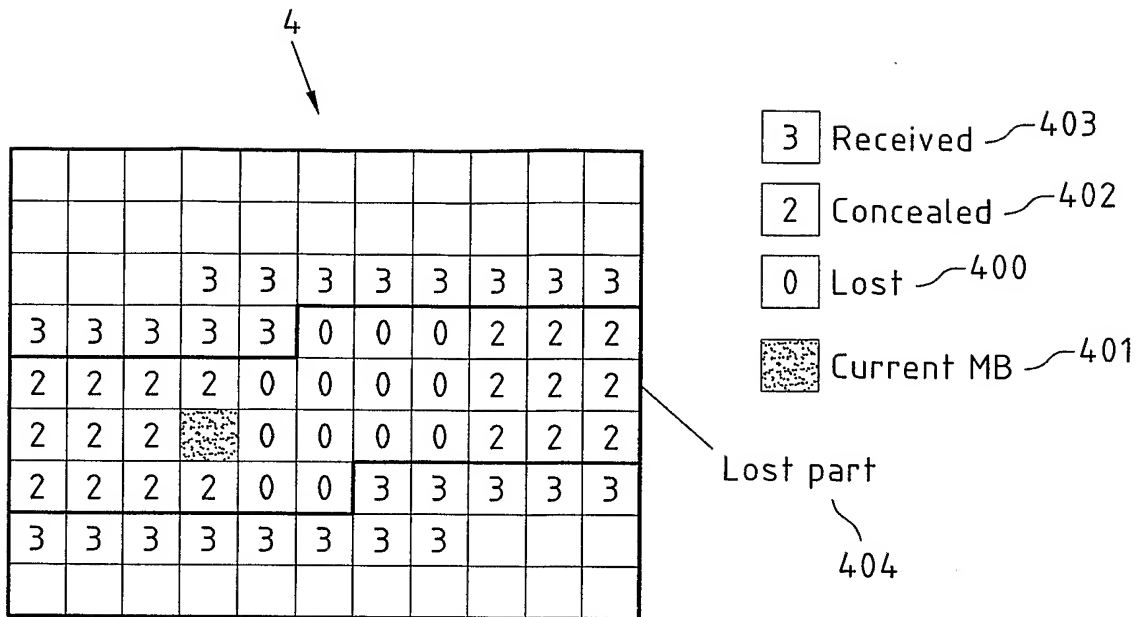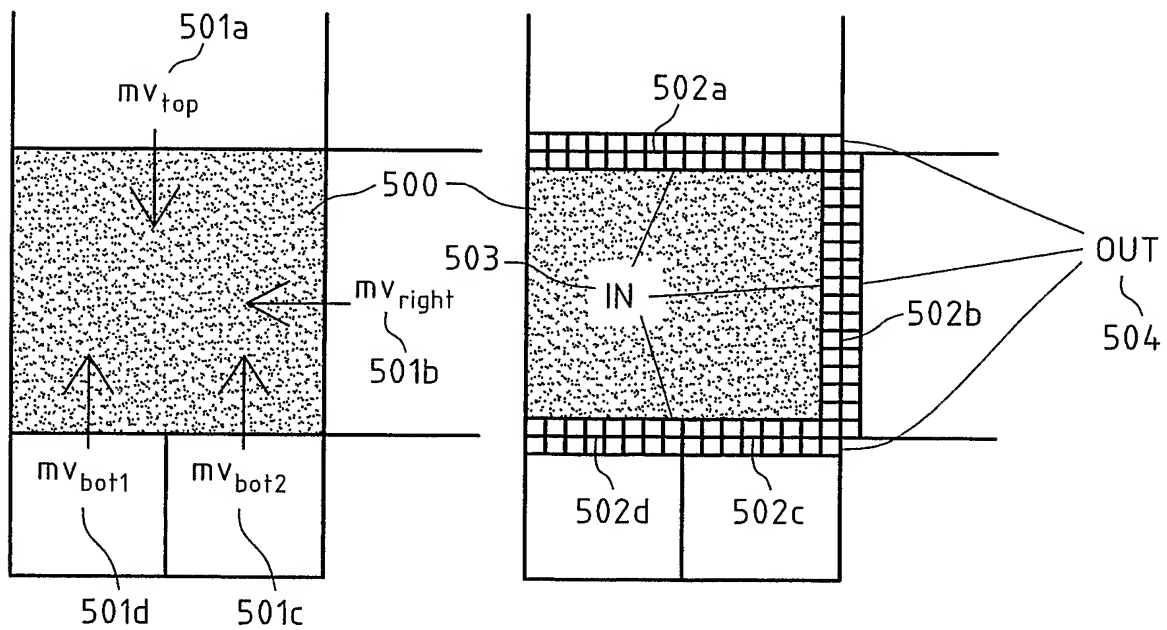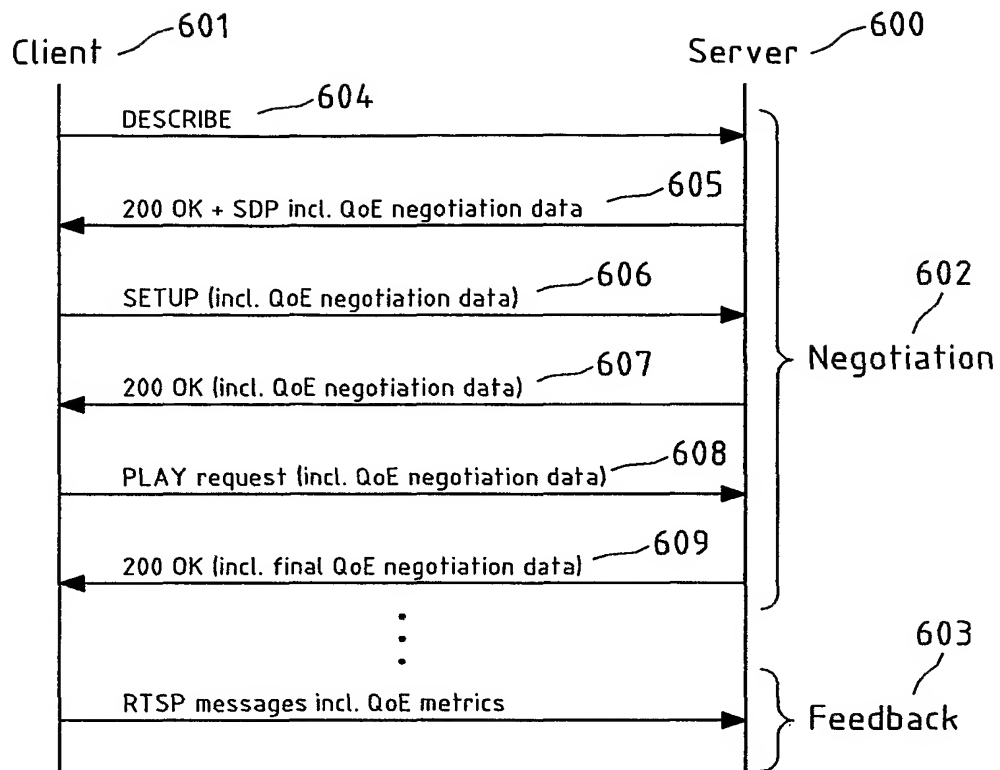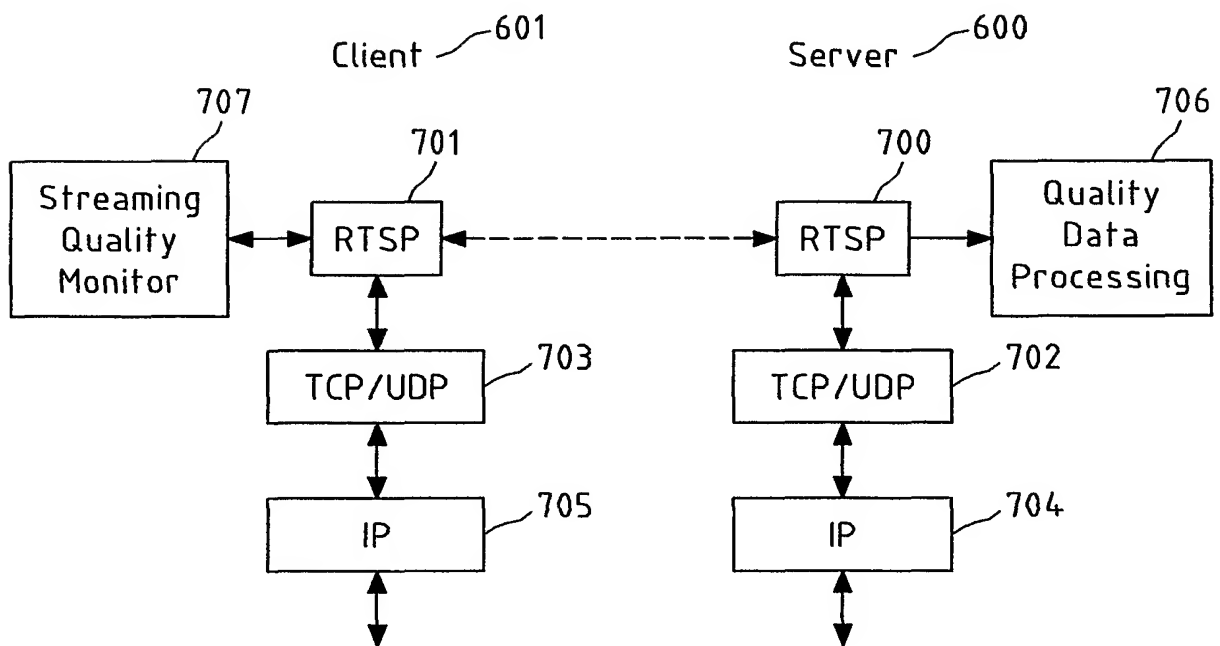
Fig3   Prior Art

Fig.4

Fig.5

5/5

Client ⟋601   Server ⟋600

DESCRIBE ⟋604

200 OK + SDP incl. QoE negotiation data ⟋605

SETUP (incl. QoE negotiation data) ⟋606   602

200 OK (incl. QoE negotiation data) ⟋607   Negotiation

PLAY request (incl. QoE negotiation data) ⟋608

200 OK (incl. final QoE negotiation data) ⟋609

603

RTSP messages incl. QoE metrics   } Feedback

Fig.6

Client ⟋601   Server ⟋600

707   701   700   706

| Streaming Quality Monitor | ⟷ | RTSP | ⟷ - - - - ⟷ | RTSP | ⟶ | Quality Data Processing |

TCP/UDP ⟋703   TCP/UDP ⟋702

IP ⟋705   IP ⟋704

Fig.7